

TARAXACUM OFFICINALE Weber.— Very common, flowers seen.

SONCHUS ASPER (L.) Hill.— In gardens and fields; flowers to mature fruit.

PRENANTHES TRIFOLIOLATA (Cass.) Fern.— Basal leaves only; in woods.

PRENANTHES ALTISSIMA L.— Among rocks, along shore; in the axils of the withered leaves of thick stem there were many short clusters of flowers, giving the appearance of fresh flowers springing from a dead plant.

HIERACIUM AURANTIACUM L.— Common in a few fields.

HIERACIUM PRATENSE Tausch.

HIERACIUM CANADENSE Michx.— Gardens; all of the hawkweeds exhibited all stages from flowers to mature fruit.

BIOLOGICAL SURVEY, Washington, D. C.

THE NAME OF THE RED OAK.

C. S. SARGENT.

IN the one hundred and ninety-fourth issue of RHODORA (February 1915) I showed that the name *Quercus rubra* Linnaeus (*Species Plantarum*, 996) belonged to the tree which was later called *Quercus falcata* by Michaux and not to the tree which has always been called Red Oak in the northern states. This change of name is one of the most unfortunate which the study of the old specimens of American plants has made necessary, for the Red Oak is one of the very few North American trees which has not been burdened with a variety of surplus names. That Linnaeus did not understand the tree which he called *Quercus rubra* is further shown by the fact that in his herbarium are two sheets of American Oaks collected by Kalm which therefore might have been before him when the first edition of the *Species Plantarum* was published. The two sheets were labeled by Linnaeus "*rubra*." On the first sheet there is a branch with half-grown leaves and withered catkins of staminate flowers. The name "*palustris*" was written on this sheet by J. E. Smith. Judging by the truncate base of the leaves it is a specimen of *Quercus coccinea* rather than of *Q. palustris*: it

certainly does not represent any form of the Red Oak. On the second sheet there is a branch with four fully grown leaves and a single detached leaf. This was also called "*palustris*" by Smith and also represents, I believe, *Quercus coccinea*. There are photographs of these specimens in the herbarium of the Arboretum.

The earliest description of the northern Red Oak appears to be that of Plukenet in the *Almagestum Botanicum* (p. 309, t. 54, f. 5, not f. 1 as quoted by Linnaeus) published in 1696. Catesby's *Quercus Caroliniensis virentibus venis muricata* (i. 21, t. 21, f. 1), judging by the figure of a single leaf and of an acorn also well represent the Red Oak. Linnaeus's "*Quercus foliorum sinibus obtusis: angulis acutis seta terminatis, intermediis vix tridentatis, margine integerrimo*" in the *Hortus Cliffortianus* (p. 448) is based on the description and figures of Plukenet and Catesby, and on a specimen presumedly from Clifford's garden now preserved in the British Museum. Of this specimen there is a photograph in the herbarium of the Arboretum. This is a leaf of the Red Oak and it was on this specimen and on the description in the *Hortus Cliffortianus* that Linnaeus based his *Quercus rubra*, var. β in the *Species Plantarum* which, as I suggested, in RHODORA last year, is our northern Red Oak.

As the name *Quercus rubra* Linnaeus must be transferred to the tree which later was called *Quercus falcata* by Michaux, the Red Oak of the southern states, another must be found for the common northern Red Oak. The Gray Oak, as Michaux called it, which I believe is only a variety of this tree and which is common in the north, was distinguished by him in his *Histoire des arbres forestières de l'Amérique septentrionale* as *Quercus ambigua*. This tree only differs from the more widely distributed and more common form of the Red Oak with broad shallow cups of the fruit by its usually smaller acorns with deeper cups. The two trees often grow together; in habit, bark and foliage they cannot be distinguished, and individual trees with fruit intermediate between the two in size and in the shape of the cups are not rare. Although the tree with the deep cups is most common along the northern border of the United States and in Canada, it extends into western New York and a specimen collected by Cocks in St. Tammany Parish, Louisiana, is clearly this northern tree.

There is some doubt about the correct name for the Gray Oak. The younger Michaux who first distinguished it called it *Quercus ambigua*. There was, however, an earlier *Quercus ambigua* used for a

Mexican species by Humboldt & Bonpland. This fact was recognized in the first English translation¹ of a part of Michaux's book and the name *Quercus borealis* was there substituted for it. Although the fact is not stated very clearly, this change was evidently made or suggested by Michaux himself, for the translator says,—“This (the name *ambigua*) which I have adopted in the French edition, circumstances have compelled me to change; MM^{rs}. Humboldt & Bonpland having previously applied it to an Oak of New Spain. I have therefore substituted the name *borealis*, as it grows further to the north than any of the Oaks of North America.” It is probably right, therefore, to credit Michaux fils with the combination *Quercus borealis* which should be adopted for the Red Oak species, for although Humboldt & Bonpland's *Quercus ambigua* is now considered a synonym of another species it is not impossible, judging from their plate in the *Plantae Aequinoctiales*, that with fuller knowledge of the Mexican Oaks than we now possess it will be shown that it is a distinct species.

Quercus borealis being used as the name for the Red Oak, it is desirable to distinguish by a varietal name the tree with the large acorns and the broad shallow cups, that is the Red Oak, as all modern authors have understood it. There were two varietal names given to this tree in 1785,² Marshall's var. *maxima* and Lamarek's var.

¹ This first English translation of a part of the younger Michaux's *Histoire des arbres forestières de l'Amérique septentrionale* appears to be little known. It is not found in the catalogues of the libraries of the British Museum or in that of the Royal Gardens at Kew. Pritzel describes the first English edition of the work as being in four volumes, giving the date of publication as 1817–1819, and it is possible therefore that he considered this earlier translation as a first volume of Hillhouse's English edition, which is really in three volumes. It is an octavo volume of two hundred and sixty-eight pages without illustrations and is devoted entirely to the Oaks. The title-page differs from that of the Hillhouse edition only in the omission of the names of several scientific societies following the name of Michaux, in the difference of the date of publication which is 1817, the date of Hillhouse's edition being 1819, and in the place of publication which, although the book was printed in Paris, is given as Philadelphia where it was sold by Thomas Dobson-Solomon Conrad. Both of these editions were printed in Paris by C. D'Hautel, but the names of the booksellers are omitted from the title-page of the Hillhouse edition. There is a preface by Hillhouse to his edition dated Paris 1819, but there is no preface to this 1817 edition, and the English translation of Michaux's introduction has an entirely different phraseology in these two editions. I have not been able to discover the name of the translator of the 1817 fragment which was probably prepared in Paris and then abandoned on account of the appearance of the Hillhouse translation. That it was not made by Hillhouse would seem to be shown by the fact that, although he placed the name of “*borealis*” at the head of the article on the Gray Oak he failed to change “*ambigua*” to “*borealis*” in the body of the article and made no reference to the reason for the change of name given in the 1817 edition. The same mistake occurs also in J. J. Smith's Philadelphia edition of 1865.

² The date on the title-page of the first volume of the *Encyclopedie Méthodique* is 1783, but it is stated in the Catalogue of the Library of the British Museum that this volume was issued in two parts and that the second part, which must have contained the article on the Oaks, did not appear until 1785.

latifolia. There is no means of knowing which was actually published first; and as there is an error in Lamarck's citation of synonyms and some vagueness in his description of the cup of the fruit, it seems best to take up Marshall's name as his description clearly refers to the common Red Oak.

If my idea that *Quercus borealis* and *Quercus rubra* of modern authors are varieties of one species, to be distinguished as such, is correct, the name of the species is *Quercus borealis* Michaux fils and the name and synonymy of the variety is as follows:

QUERCUS BOREALIS, var. **maxima**, nov. comb.

Quercus rubra, β Linnaeus, *Spec.*, 996 (1753).

Quercus rubra Du Roi, Harbk. Baumz. ii. 265 (excl. syn. Linnaeus & Catesby, not Linnaeus, t. 5, f. 2 [1772]) and all later authors.

Quercus rubra maxima Marshall, *Arbust. Am.* 122 (1785).

Quercus rubra, α *latifolia* Lamarck, *Encycl. Meth.* i. 721 (excl. syn. Plukenet) (1785).

ARNOLD ARBORETUM.

STAMINODY OF THE PETALS IN AMELANCHIER.

C. A. WEATHERBY.

LAST spring I saw, for the first time in the field, the little shad-bush with reduced petals which has been called *Amelanchier oblongifolia*, var. *micropetala* by Dr. Robinson,¹ *A. nantucketense* by Mr. Bicknell,² and a hybrid of *A. oblongifolia* and *A. stolonifera* by Prof. Wiegand.³ Since this was my first sight of it, I examined it with more than usual care and presently noticed that, in many of the tiny petals, the margins were inrolled and of a yellowish hue for a certain distance on each side. Subsequent examination of the inrolled portion showed it to be thinner than the rest of the petal and of a different cell-structure; and, in the latter respect as well as in color, to be precisely similar to the walls of the anther. Moreover, it contained more or less granular matter

¹ *Rhodora* x. 33.

² *Bull. Torr. Bot. Club* xxxviii. 453.

³ *Rhodora* xiv. 133.